IMPLEMENT THE SAT

Implement the SAT

Introduction

We are going to discuss guidelines to implementing the Systems Approach to Training (SAT). We'll accomplish this by discussing the products generated from each phase of the SAT, the requisite training required in relation to each phase, the resources and orders necessary to implement the SAT, and how to incorporate the evaluation results to improve a course.

Importance

In this course, you, as an administrator, will be provided a better understanding of your role in implementing the Systems Approach to Training (SAT).

TERMINAL LEARNING OBJECTIVE: With the aid of references, implement the Systems Approach to Training per the SAT and AFMAN 36.2235.

ENABLING LEARNING OBJECTIVES:

Learning Objectives

With the aid of references:

- Distinguish the products generated from each phase of the SAT to support school requirements per the SAT.
- Associate the requisite training required with its phase in the SAT process to support school requirements per the SAT.
- ❖ Identify the orders necessary to implement the Systems Approach to Training to support school requirements per the SAT.
- Incorporate evaluation results to improve a course of instruction to support school requirements per MCO 1553.2, MCAIMS Users Manual.

In this Lesson

This lesson discusses the follow topics:

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Mission of SAT

Mission

The mission of any instructional system is to:

Determine instructional needs and priorities.

Develop effective and efficient solutions.

Implement these solutions in a competent manner.

Assess the degrees to which the output of the system meets the specified needs.

Goal

The goal of Marine Corps instruction is to develop performance-based, criterion-referenced instruction that promotes student transfer of learning from the instructional setting to the job. For the learning outcome to be achieved, instruction must be effective and efficient. Instruction is effective when it teaches learning objectives based on job performance requirements and efficient when it makes the best use of resources.

Intent

The SAT was created to manage the instructional process for analyzing, designing, developing, implementing, and evaluating instruction. The SAT serves as a blueprint for organizing or structuring the instructional process. The SAT is a set of comprehensive guidelines, tools, and techniques needed to close the gap between current and desired job performance through instructional intervention.

Some of the benefits that SAT produces are as follows:

Benefits

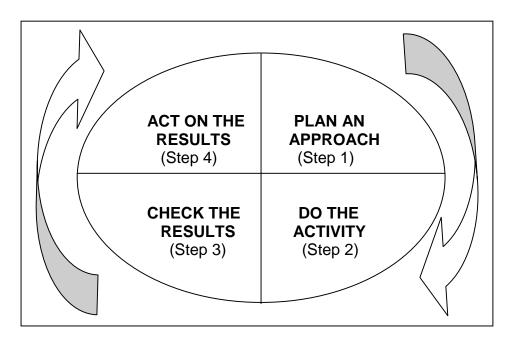
- Reduces number of school management decisions that have to be made subjectively.
- May identify more than one solution to an instructional problem.
- Continuous process allowing any one of the phases and the associated functions to occur at any time.
- Provides a system of checks and balances to ensure all instructional data are accounted for and that revision to instructional materials are made.
- Presents generalized approach that can be adapted to any instructional situation.



The Shewhart Cycle Model

The Shewhart Cycle Model

The Shewhart Cycle Model is a systematic approach to achieving continuous improvement in quality. The cycle includes planning, doing, checking, and acting.



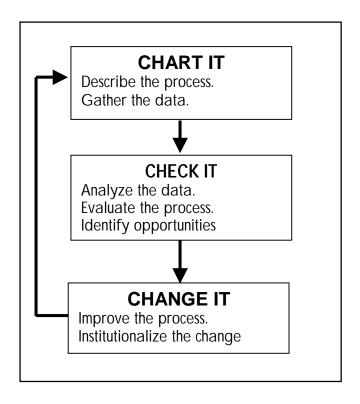
	Steps for Using the Shewhart Cycle Model
Step 1	Plan an approach for quality improvement. Study the process flow and any existing data. Formulate possible improvements, experiments to be run, or additional data to be gathered.
Step 2	Do the activity planned. Implement the improvement effort that you planned. Train the people who are responsible for implementation.
Step 3	Check the results. Measure the results of the improvement effort you implemented. Analyze the data you collected.
Step 4	Act on the results. If the effort was truly an improvement, standardize and document it. If it wasn't successful, determine what could be done to improve it.
Step 5	Repeat. Continue around the cycle again by planning and carrying out further activity.





Chart-it, Check-it, Change-it

3 Principle Steps



<u>Chart-it</u>. Using a process flowchart, describe the process to be improved. Gather data on the process and its products.



<u>Check-it</u>. Analyze the data to isolate the problems and opportunities. Evaluate the process to identify alternative approaches and identify opportunities (i.e., useful changes from alternatives.

<u>Change-it</u>. Improve the process by implementing changes identified as opportunities. Institutionalize the changes through training, standardization, and other means. Then use another process (or use this same one again) to make further improvements.



SAT Phases

Skills Check

Groups will be assigned one of the SAT phases. Within that phase your group should answer the following questions to be discussed in class: (Record answers on Turn Chart.)



Item	Questions on Phase
1	List steps within the Phase.
Answer	
2	Who is Responsible for elements within the Phase?
Answer	
3	Outcome(s) of Phase.
Answer	
4	Discuss how you as an Administrator can provide support to each phase of the SAT.
Answer	

Analyze Phase

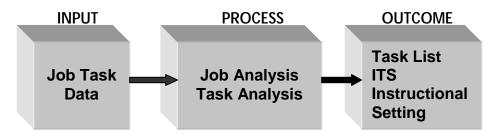
Purpose

During the Analyze phase, a particular job or Occupational Field/Military Occupational Specialty (OccFld/MOS) is analyzed by the Training and Education Command (TECOM) to find out what the jobholder does on the job, the order in which they perform it, and the standard of performance required. The result, or outcome, of the Analyze phase is Individual Training Standards (ITS) selected for instruction. ITS's are behavior statements that define job performance in the Marine Corps and serve as the basis for all Marine Corps instruction.

Elements



ANALYZE PHASE	
Job Analysis	Determines what the jobholder must know or do on the job. Results in a verified list of all duties and tasks performed on the job.
Task Analysis	Determines the job performance requirements requisite of each task performed on the job which includes: • Task Statement • Conditions • Standards • Performance Steps • Administrative Instruction • References Job performance requirements in the Marine Corps are defined by the Individual Training Standard (ITS).
Determine Instructional Setting	Determined by selecting tasks for instruction. Tasks are selected based on data collected concerning several criteria relating to each task.



Design Phase

Purpose

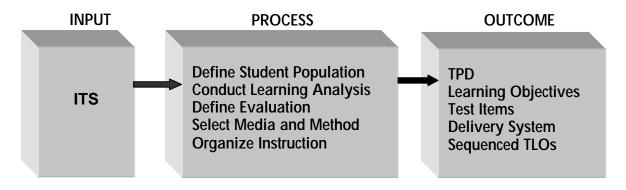
During the Design phase, functional Learning Center instructional developers equate task performance under job conditions (ITS's) to task performance within the instructional setting (learning objectives). The goal of this phase is to simulate as closely as possible the real-world job conditions within the instructional environment. The closer the instructional conditions are to the real world, the more likely it is that the student will transfer the learning to the job. The Design phase is made up of five separate elements, each of which has a specific purpose.



Elements



DESIGN PHASE	
Write TPD	The Target Population Description (TPD) defines the student population entering the course.
Conduct Learning Analysis	The learning analysis is conducted to develop the learning objectives. The learning analysis describes what the students will do during instruction.
Write Test Items	Test items are derived from the learning objectives and are used to determine if the students have mastered the learning objectives.
Select Delivery System	The delivery system is the primary means by which the instruction is presented to the students.
Sequence Learning Objectives	Learning objectives are sequenced to allow a logical transition from one subject to the next. This permits efficient instruction and serves as a rough course structure. This step answers the question of; "In what order will the instruction be taught?"



Develop Phase

Purpose

The Develop phase builds on the outcomes of the Analyze and Design phases. The Analyze phase identifies those tasks to be instructed and the desired standard to which those tasks must be performed. The Design phase outlines how to reach the instructional goals determined in the Analyze phase by converting job tasks to tasks taught in the instructional environment, and further builds the foundation for instruction. During the Develop phase, instructional developers from the Functional Learning Center modify the instructional program to fit the requirements identified in the Analyze and Design phases.

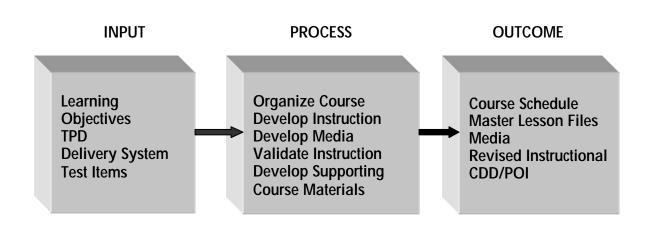
DEVELOP PHASE

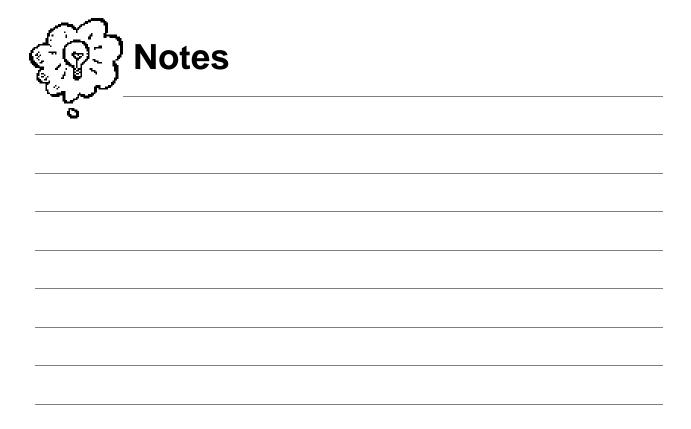
Elements



	DEVELOT THASE
Develop Course Schedule	The course schedule provides a detailed structure for the course to include lesson times, titles, designators, locations, and references to be used.
Develop Instruction	This section details the process for developing the lesson plans and supporting course materials that instructors will present during the implement phase. Maximizing the transfer of learning is the goal of developing instruction.
Develop Media	This section takes the media selected during the Design phase and develops them into their final form for presentation to the students. The purpose of media is to enhance the instruction and the transfer of learning by presenting lesson material in a manner that appeals to the many senses, complements student comprehension level, and stimulates student interest.
Validate Instruction	The goal of validation is to determine the effectiveness of instructional material and to make any necessary revisions prior to implementation.
Develop CDD and POI	The CDD provides a detailed summary of the course including instructional resources, class length, and curriculum breakdown. The POI provides a detailed description including structure, delivery system, length, learning objectives, and evaluation procedures. A formal course of instruction must have an approved POI.

Develop Phase (Cont)





Implement Phase

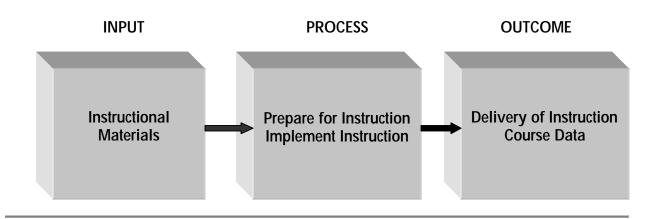
Purpose

During the Implement phase, instructors within the Functional Learning Center prepare the class and deliver the instruction. The purpose of the Implement phase is the effective and efficient delivery of instruction to promote student understanding of material, to achieve student mastery of learning objectives, and to ensure a transfer of student knowledge from the instructional setting to the job.

IMPLEMENT PHASE	
Prepare for Instruction	Preparation involves all those activities that instructors and support personnel must perform to ready themselves for delivering the instruction.
Implement Instruction	Implementing instruction is the culmination of the Analyze, Design, and Develop phases of instructional materials. Although the instructional developer designed and developed the instructional material so that it maximizes transfer of learning, the way the instructor presents the material will play a crucial part in determining whether students learn and transfer that learning to the job. Implementation is the instructor's delivery of instruction to the students in an effective and efficient manner.

Elements





Evaluate Phase

Purpose

The Evaluation phase measures instructional program effectiveness and efficiency. Evaluation and revision drives the SAT model. Evaluation consists of formative and summative evaluation and management of data. Formative evaluation involves validating instruction before it is implemented and revising instruction to improve the instructional program prior to its implementation. Formative evaluation is ongoing at all times both within and between each phase of the SAT. Summative evaluation is conducted after a course of instruction has been implemented. Summative evaluation assesses the effectiveness of student performance, course materials, instructor performance, and/or the instructional environment.

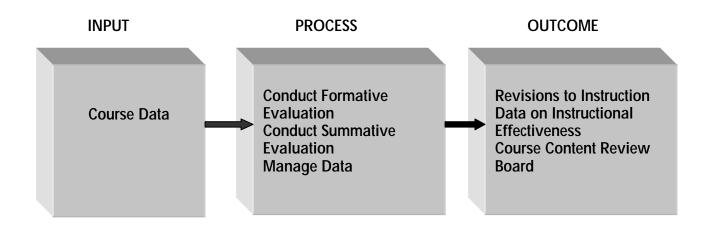
EVALUATE DUACE

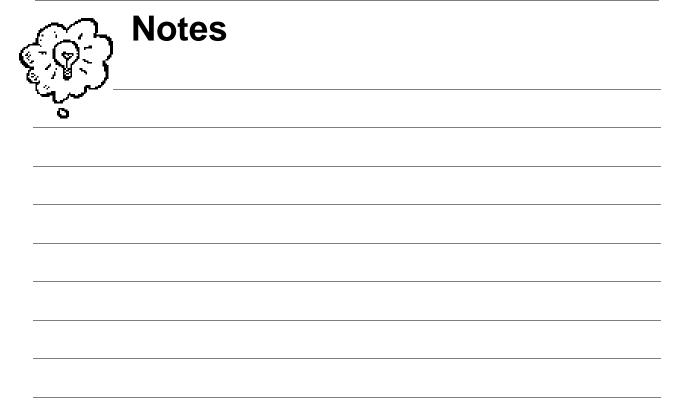
Elements



EVALUATE PHASE	
Plan and Conduct Evaluation	The purpose of planning and conducting evaluation is to develop and implement a strategy for determining the effectiveness and efficiency of an instructional program.
Analyze and Interpret Data	After the evaluation data have been gathered during the conduct of evaluation, the results are analyzed and interpreted to assess instructional program effectiveness and efficiency.
Data Management	Evaluation data is managed and the results of evaluation are documented and reported so that instruction is revised, if necessary. Once all of the data is interpreted, three courses of action may be taken:
	 All evaluation data is recorded and preserved for future use should no revisions to the course be deemed necessary.
	 Evaluation is continued through the collection of additional data. This is done if there is a suspected deficiency in the instructional program.
	 Revisions to course materials are identified and presented at a Course Content Review Board (CCRB).

Evaluate Phase (Cont)





Requisite Training Requirements

Training Requirements Per MCO 1553.4j Formal School Instructor Course (FSIC)

Curriculum Developer Course (CDC)

Administrator Course (AC)

FSIC

<u>Formal School Instructor Course</u> is designed for the Formal School Instructor with emphasis on the techniques and methods of instructional presentation. The focus of this course is on the Implementation Phase of the Systems Approach to Training (SAT). The graduate will be prepared to review instructional objectives, lesson materials, student materials and effectively present a period of instruction.

CDC

<u>Curriculum Developer Course</u> is designed for personnel who develop instructional materials. The focus of this course is on the Design and Develop Phases of the SAT. The graduate will be prepared to design and develop effective training materials based on Individual Training Standards (ITS), and develop Course Descriptive Data (CDD) and Programs of Instruction (POI) using the Marine Corps Automated Instructional Management System (MCAIMS).

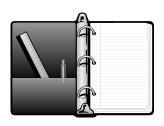
AC

<u>Administrator Course</u> is designed for the Formal School Administrator. The focus of this course is on the Evaluation Phase of the SAT, and preparing graduates with the relevant orders and process associated with managing and supervising instruction in a Marine Corps Functional Learning Center.

Resources to Implement SAT

List of Resources

As part of evaluation planning, information and materials that may assist in the evaluation should be identified and reviewed. Resource information pertinent to the evaluation topics is important, as is any guidance from school supervisory personnel. All documents should also be reviewed for currency, relevance, and suitability for schoolhouse management.



Course Descriptive Data (CDD)
Program of Instruction (POI)
SAT Guide
Functional Learning Center's SOP
References Governing Implementation of SAT
Existing Evaluation Instruments
Previous Evaluation Data

CDD and **POI**

Every Marine Corps formal course of instruction must have an approved Program of Instruction (POI). An approved CDD drives the development of a course POI; a CDD is developed and must be approved before a POI is submitted. However, the information contained in the CDD supports the information in the POI.

CDD	
POI	ı

CDD

It provides a detailed summary of the course including instructional resources, class length, and curriculum breakdown. The CDD provides the justification and documentation for development or refinement of formal POIs taught at Marine Corps training and education institutions. There are 24 elements to the CDD.

Course Title	The course title must appear as it is listed in MCO P1080.20_ (JUMPS/MMS Codes Manual) unless a change is required or the CDD is for a new course.
Location	Record the complete address for each location the course is taught.
Course ID	For a formal course, this is generally the Course ID listed in the TIP. For a new course, contact T&E Division for guidance.
Other Service Course Number	Code assigned by host service to the same course.
Military Articles and Service List Number	The MACAG code number provides information on those courses available to international military training.
Purpose	Include a concise statement about the goals of the instructional program. At MCCSSS we use "To provide education in or for" and then explain the reason the course is offered at MCCSSS.
Scope	Provide a list of the main subjects covered in the course. The list should be comprehensive to include all topic areas. At MCCSSS - the duty areas where the selected task for a particular course is identified should be referenced here. The duty areas are the topics areas mentioned in the ITS order.
Length (Peacetime)	Total number of instructional days required to complete the course during peacetime operations, based on academic and administrative hours.
Curriculum Breakdown (Peacetime	MCAIMS will compute this for you once all concepts cards have been recorded. This section provides a total of your academic hours and administrative hours.

$Resources\ to\ Implement\ SAT\ ({\tt Cont})$

CDD (cont)

Length (Mobilization)	Record the total number of instructional days required for the course during wartime mobilization. During mobilization the instructional week averages 60 hours (10 hour day x 6 days). For courses on three shifts with equipment or facility constraints, the mobilization instructional week averages 48 hours (8 hour day x 6 days). This time includes both academic and administrative hours. CMC may dictate these hours upon mobilization. If the course will discontinue upon mobilization, enter "NA". If the course length is the same during mobilization as in peacetime, check "Same as peacetime".
Curriculum Breakdown (Mobilization)	Provide a breakdown of the curriculum in academic and administrative hours for mobilization. During mobilization, it is likely academic hours will be increased, and administrative hours will be decreased. If the course will discontinue upon mobilization, enter "NA". If the curriculum breakdown is the same during mobilization as in peacetime, check "Same as peacetime".
Maximum Class Capacity	The maximum number of students in one class for this course based on available resources, such as existing facilities, messing, billeting, equipment, budget, and personnel limitations.
Optimum Class Capacity	Ideal class size. The class size capitalizes on all facilities/equipment and instructional capabilities of the school.
Minimum Class Capacity	Minimum class size. Below this size, it is no longer cost effective to run a class. Consider the following: the methods used to complete a course, input from Manpower Programming & Budgeting (MPB) branch, T&E Division, OccFld sponsor and the resources on hand necessary to run the class. There is no formula for this.
Class Frequency	Number of classes required to support the throughput as contained in the TIP for that fiscal year.
Student Prerequisites	Provides information on the basic qualifications personnel attending the course must meet. This information can be found in the TPD.
MOS Received	The MOS assigned (refer to the TIP) upon successful completion of the course. If the course does not result in an MOS assignment, record "None".

CDD (cont)

Quota Control	The name of the agency that manages quotas. Obtain this information from the Occupational Field Sponsor. In most cases this is done by CG MCCDC C463 FM (Formal Training).
Funding	The name of the agency funding temporary additional duty incidental to a student's attendance at the course. If the using agency must also bear cost, such as tuition, a statement should be made to this effect. Entry level is funded by CG MCCDC (C463), Career level & Officer courses are funded by CG MCCDC (C463 FM).
Reporting Instructions	Designate to whom the student must report upon arrival for a course of instruction. Include information on transportation and directions. Also include a statement indicating the availability of Government billeting and messing.
Instructor Staff Requirements	Based on the academic course hours and computed in accordance with MCO P5320.5_, Personnel Requirements Criteria Manual (PCRM). Separate correspondence must be submitted to CG, MCCDC (C53) via (C463) requesting a T/O change. The first part of the instructor staffing requirements includes identifying the billet line numbers, grades, and MOSs for all instructors and instructor supervisors necessary to teach the course. This information comes from the current T/O.
Training/ Education Support Requirements	This is a listing of personnel who are required to support the course (other than instructors). This may include individuals who perform curriculum development, administrative functions, testing and evaluation, or equipment maintenance beyond those already included in your T/O. If no additional personnel are necessary, leave this field blank.
Task List	Comments may concern training devices or operations and maintenance requirements. If no additional support requirements are necessary beyond those listed on your T/E, you may leave this field blank.

POI

The POI is a formal school's plan for instructing Individual Training Standards (ITS). Specifically, a POI describes a course in terms of structure, delivery methods and media, length, intended learning objectives, and evaluation procedures. It also serves as a historical record that reflects the continual evolution of the course. POI requirements, in order of presentation, includes:

POI (cont)

Title Page	The title page provides information necessary to identify the document. This includes the course title, SSC, school name/address, and effective date. The effective date is left blank until the POI is approved, then the date it is approved is recorded. Each time a course POI is approved with subsequent changes, the date of the new approval is recorded as the revised date, otherwise, a revised date is not included.
Certification Page	The signed certification page signifies the School Director's approval of the POI. The page must include the SSIC, originator's code, and the date. Once the POI is approved, the signed approval letter (initiated and forwarded by MCCDC, C 461) is duplicated on the bottom half of this page.
Record of Changes Page	The record of changes page is a log of changes made since the last POI review. Each entry must indicate the change number, date of change, date received, date entered, and the signature of the individual entering the change.
Preface	The preface presents a brief purpose statement and provides an address for submitting comments and recommendations concerning the POI.
Table of Contents	The table of contents details the contents of the POI and is arranged by section number and section title. The table of contents should include, by section: CDD, Summary, Body, Annexes, Student Performance Evaluation, Task List, Course Evaluation, and Distribution.
CDD	Section I of the POI consists of the CDD with preface. The preface should include a brief purpose statement and the address where comments and recommendations concerning the POI may be sent. The CDD provides a detailed summary of the course. The course title, scope, length, and instructional requirements are representative of the type of information provided.
Summary	Section II of the POI consists of a summary of hours for the course. Included are breakdowns of the peacetime academic and administrative hours. Also included is you mobilization comment.
Scope of Annex	Section III of the POI consists of the Scope of Annexes. This section lists each annex and describes its contents. If there is a difference in the scope between the conduct of the course during peacetime and mobilization, it must be annotated here.

$Resources\ to\ Implement\ SAT\ ({\tt Cont})$

POI (cont)

Course Concept Cards	up the bulk of the POI, appearing the large street introductory material is provided	d to explain the contents of this minimum, each Annex and its title		
Student Performance Evaluation	the school SOP for specific eval	nance (mastery learning, see and evaluation procedures. Refer to uation procedures. Student o include, at a minimum: test title, ten, performance) and time		
Distribution	In accordance with MCO 1553.2, the POI is distributed by the formal school within 90 days after CG, MCCDC (C 461) approval. The distribution page in Section VIII lists the offices, listed below, which receive the POI and the number of copies sent.			
	Distribution	# of copies		
	CG, MCCDC (C 461)	2		
	Marine Corps Institute (M	CI) 1		
	(POIs are used by course developers at MCI as primary source documents in the design and development of job aids and similar instructional packages.)			
	American Council on Education (ACE) 1			
		quivalency in terms of college credit A formal school does not have to		
	MOS/OCCFLD Sponsor	1		
	CG, MarForLant	1		
	CG, MarForLant	1 1		

SAT Guide

The SAT guide serves as a primary source of information and guidance for instructional program development and management. While the information contained in the SAT Guide is based on and derived from accepted adult learning theories and current instructional development practices, the Guide is designed as an introduction to these topics. Additional research in education-related fields is recommended for those personnel who participate in the development or management of instruction.

Functional Learning Center's SOP

Each formal school should have Standard Operating Procedures (SOP) that provide guidance to the operation of the Functional Learning Center. It may contain student policies, academic policies, instructor responsibilities, scheduling information, evaluation instructions, Course Content Review Board (CCRB), Record of Proceedings (ROP) format and various other administrative procedures. This is a tool and those who work within the Functional Learning Center should be familiar with the SOP.

Activity

You should have brought your Functional Learning Center's SOP with you to class. Utilizing the SOP Checklist within the Supplemental Handouts, examine your SOP for the elements listed on the SOP Checklist..

List any items that are missing from the SOP below:



References Governing Implementation of SAT



Marine Corps Order 1553.2 talks about Management for Marine Corps Formal Schools and Training Centers. The references used to prepare this order are as follows:

MCO 1553.1B: The Marine Corps Training and Education System

Marine Corps Automated Instructional Management Systems (MCAIMS) Users Guide

MCO 7310.47F: Formal Schools training; costing and reporting

By Name Assignment (BNA) User's Manual

Existing Evaluation Instruments

Student Test Data	Student performance provides the most direct measure of instructional effectiveness.
Questionnaires	Questionnaires are a self-report type of measure and, therefore, provide qualitative data on a topic. This subjective data can be very useful because they provide opinions of how the course was implemented and reveal any perceived difficulties inherent in the instructional process.
Interview	Interviews can collect the same information as questionnaires concerning student job performance, instructor performance, and course materials. Interviewing allows more detailed information to be gathered because explanations can be given to questions that are not understood by the respondents.
Observation	Data concerning student and instructor performance can be effectively gathered via observation.

Previous Evaluation Data

After Instruction Report (AIR)
Course Content Review Board (CCRB) Minutes
Inspector General (IG) Inspections
Master Lesson File (MLF)

Functional Learning Center's MLF

Master Lesson File (MLF)



Within the supplemental handouts, there are 21 items listed that should be contained in the MLF. Of the 21 items, the following seven items are required to be in the MLF per MCO 1553.2.

- 1. Individual Training Standard
- 2. Learning Analysis Worksheets
- 3. Learning Objective Worksheets
- 4. Lesson Plan
- 5. Student Outline
- 6. Media or List Required Media and Locations
- 7. Supplemental Student Material (when applicable)

Activity



You should have brought a MLF with you to class. Utilizing the MLF Checklist within the Supplemental Handouts, examine your MLF to ensure that it is complete.

List any items that are missing from the MLF below:	

Documenting FLC Resource Requirements

MCO 1553.2

This order provides the policy for the FLC's resource requirements.

Formal School Management Checklist

This checklist is found as an enclosure in MCO 1553.2.. You can reference MCO 1553.2 in your Supplemental Handouts.

Incorporating
Evaluation
Results to
Improve Course

What is determined during the evaluation phase links back to the other phases. Due to this fact, administrators must have a grasp on what is accomplished in each phase so that they know what aspect of the process needs to be corrected or improved.



Notes

